

2.2.3.8 Northern Lake Michigan Coastal Ecological Landscape

General Description

This Ecological Landscape is located in northeastern Wisconsin (Figure 2-24), and includes Green Bay and the northern part of the Door Peninsula. Its landforms consist of the Niagara escarpment, a prominent dolomite outcropping along the east side of Green Bay, a lacustrine plain along the west side of Green Bay, and ground moraine elsewhere. Low sand dunes and beach ridges that support Great Lakes endemics and many other rare species are found along the Great Lakes shoreline. The influence of Lake Michigan moderates extreme temperatures. Soils are very diverse;



Figure 2-24. Northern Lake Michigan Coastal Ecological Landscape.

in some areas, lacustrine sands are found overlying clays or bedrock within only a few feet of the surface. In the Door Peninsula, soils are typically stony loamy sands to loams. Poorly drained sands are common in the lake plain or in depressions between dunes and beach ridges. On the western side of Green Bay, the ground moraine is composed mostly of moderately well drained, rocky sandy loams, interspersed with lacustrine sands and clays, and peat and muck also common.

Vegetation

Historic vegetation included maple-basswood-beech forest, hemlock-hardwood forest, northern white cedar swamp, hardwood-conifer swamp, wet meadows, and coastal marshes. Conifer dominated upland forests that resemble the boreal forest were present along Lake Michigan; they contain a significant component of white spruce and balsam fir. Cliffs, sinkholes, and dolomite ledges are associated with the Niagara Escarpment.

Current vegetation consists of more than 60% non-forested land, most of which is in agricultural crops, with smaller amounts of grassland, wetland, shrubland, and urbanized areas (Figure 2-25). Forested lands are dominated by maple-basswood, with smaller amounts of lowland hardwoods, aspen-birch, and lowland conifers. High quality areas of exposed alkaline bedrock beach occur on the northern Door Peninsula, providing habitat for many rare plants. Several islands lie off the Door Peninsula and these also provide critical habitat for rare species and colonially nesting birds.

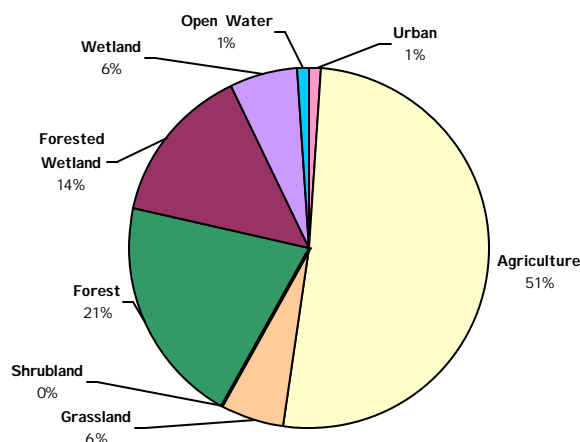


Figure 2-25. Current land cover in the Northern Lake Michigan Coastal Ecological Landscape.

Hydrologic Features

This Ecological Landscape has an extensive shoreline along Green Bay, on the west coast of Lake Michigan. Many small rivers and creeks drain the numerous linear wetlands on the west side of Green Bay that trend southwest to northeast. Large rivers that flow through the Ecological Landscape are the Oconto, Peshtigo, and Menominee Rivers. There are no large inland lakes, but lakes that do occur have relatively high pollution levels. Lakes in four out of six watersheds are classified by Wisconsin DNR as highly polluted.

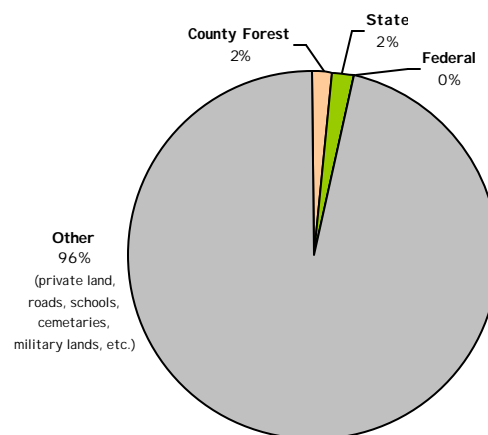


Figure 2-26. Public land ownership in the Northern Lake Michigan Coastal Ecological Landscape

Land Use

The total land area for the Northern Lake Michigan Coastal Ecological Landscape is approximately 1.3 million acres, of which 37% is classified as timberland. About 3.5% of the Ecological Landscape is public land (Figure 2-26).

Socioeconomics

Socioeconomic data are summarized based on county-level approximations of the Ecological Landscape (referred to as a "region"). Economic data are available only on a political unit basis with counties as the smallest unit. The counties included in this socioeconomic region are Door, Marinette, Oconto, and Shawano ("Northern Lake Michigan Coastal Region").

Recreation is a major economic contributor to the Northern Lake Michigan Coastal Region, especially in Door County, with an above average number of state parks, forests, and recreation areas. Agriculture, however, is not a large contributor to the economy of the region. Farm acreage accounts for only 36% of the land base of the region and total market value per acre of agricultural products is below average compared to other regions.

Population in the Northern Lake Michigan Coastal Region has been growing relatively rapidly since 1970, especially for elderly people. The population density of the region (35 persons/mi²) is slightly less than half that of the state as a whole (96 persons/mi²). It has the second highest percentage of elderly (over 65 years old) and the third highest median age. It has the third lowest percentage of minorities and the fourth lowest percentages of high school and college graduates. Economically, it is near average with slightly lower than average rates of unemployment and poverty. The percentage of farming jobs is second highest in this region, whereas the proportion of government jobs is fourth lowest.

Management Opportunities

- This Ecological Landscape has many rare and endemic natural communities along Lake Michigan.
- Protection of key stretches of the Nigara Escarpment that are important for rare species.
- Protection and management of coastal ridge and swale forest, and the beaches, dunes, and boreal forest in Door County, which are unique to the Great Lakes shoreline.
- Reforestation of marginal lands on the Door Peninsula is desirable to reduce adverse edge effects and accommodate rare area-sensitive animals.
- Forest interior species management is possible in the northern part of the Ecological Landscape.
- Within the interior of this Ecological Landscape there are opportunities for management of large conifer and hardwood swamps.
- There are opportunities for the restoration and management of lakeshore marshes, sedge meadows, and wet forests along the west shore of Green Bay.
- Lake Michigan shoreline endemic species require protection of alkaline rock shores, coastal estuaries, boreal forests, and alvar, beach, and dune communities.
- Most of the coastline in this Ecological Landscape is important for migratory birds.
- Protection of islands off the coast of this Ecological Landscape, which are important for colonial nesting birds and are not significantly impacted by deer or human development.
- Colonial waterbird island rookeries occur along the Lake Michigan coast in Green Bay and the Grand Traverse Islands. These rookeries will need protection, monitoring, and management. Improving the water quality in lower Green Bay will reduce the negative impacts of pollutants.
- Maintenance of migratory corridors, resting, and feeding areas for migratory birds, including raptors, songbirds, and waterfowl is important throughout the Ecological Landscape.
- The Menominee River corridor is located in this Ecological Landscape, affording management opportunities for floodplain forests.
- Protection of the Wolf, Oconto, and Peshtigo rivers should be considered.
- Green Bay and reefs in the Bailey's Harbor area of Door County are significant fish spawning areas.

Natural Communities

The following table (2-10) lists the natural communities occurring in the Northern Lake Michigan Coastal arranged by the level of opportunity to sustain and manage the community type in this Ecological Landscape. For further explanation of natural communities and opportunities to sustain them, see Section 3.3.

Table 2-10. Natural communities occurring in the Northern Lake Michigan Coastal arranged by the level of opportunity to sustain and manage the natural community type in this Ecological Landscape.

Major Opportunity	Important Opportunity	Present
Northern Mesic Forest	Boreal Forest	Southern Mesic Forest
Northern Wet-Mesic Forest	Northern Dry Forest	Great Lakes Barrens
Emergent Aquatic	Northern Dry-Mesic Forest	Emergent Aquatic-Wild Rice
Boreal Rich Fen	Northern Hardwood Swamp	Alder Thicket
Northern Sedge Meadow	Northern Wet Forest	Interdunal Wetland
Shrub Carr	Floodplain Forest	Open Bog
Dry Cliff	Cedar Glade	Alvar
Forested Ridge and Swale	Submergent Aquatic	Bedrock Glade
Great Lakes Alkaline Rockshore	Ephemeral Pond	
Great Lakes Beach	Shore Fen	
Great Lakes Dune	Southern Sedge Meadow	
	Clay Seepage Bluff	
	Moist Cliff	